

109TH CONGRESS  
1ST SESSION

# S. 711

To amend the Methane Hydrate Research and Development Act of 2000 to reauthorize that Act and to promote the research, identification, assessment, exploration, and development of methane hydrate resources.

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## IN THE SENATE OF THE UNITED STATES

APRIL 5, 2005

Mr. AKAKA (for himself, Ms. MURKOWSKI, and Mr. STEVENS) introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

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## A BILL

To amend the Methane Hydrate Research and Development Act of 2000 to reauthorize that Act and to promote the research, identification, assessment, exploration, and development of methane hydrate resources.

1       *Be it enacted by the Senate and House of Representa-*  
2       *tives of the United States of America in Congress assembled,*

3       **SECTION 1. SHORT TITLE.**

4       This Act may be cited as the “Methane Hydrate Re-  
5       search and Development Reauthorization Act of 2005”.

1 **SEC. 2. METHANE HYDRATE RESEARCH AND DEVELOP-**  
2 **MENT.**

3 The Methane Hydrate Research and Development  
4 Act of 2000 (30 U.S.C. 1902 note; Public Law 106–193)  
5 is amended to read as follows:

6 **“SECTION 1. SHORT TITLE.**

7 “This Act may be cited as the ‘Methane Hydrate Re-  
8 search and Development Act of 2000’.

9 **“SEC. 2. FINDINGS.**

10 “Congress finds that—

11 “(1) in order to promote energy independence  
12 and meet the increasing demand for energy, the  
13 United States will require a diversified portfolio of  
14 substantially increased quantities of electricity, nat-  
15 ural gas, and transportation fuels;

16 “(2) according to the report submitted to Con-  
17 gress by the National Research Council entitled  
18 ‘Charting the Future of Methane Hydrate Research  
19 in the United States’, the total United States re-  
20 sources of gas hydrates have been estimated to be on  
21 the order of 200,000 trillion cubic feet;

22 “(3) according to the report of the National  
23 Commission on Energy Policy entitled ‘Ending the  
24 Energy Stalemate—A Bipartisan Strategy to Meet  
25 America’s Energy Challenge’, and dated December

1       2004, the United States may be endowed with over  
2       1/4 of the methane hydrate deposits in the world;

3           “(4) according to the Energy Information Ad-  
4       ministration, a shortfall in natural gas supply from  
5       conventional and unconventional sources is expected  
6       to occur in or about 2020; and

7           “(5) the National Academy of Science states  
8       that methane hydrate may have the potential to al-  
9       leviate the projected shortfall in the natural gas sup-  
10      ply.

11   **“SEC. 3. DEFINITIONS.**

12       “In this Act:

13           “(1) CONTRACT.—The term ‘contract’ means a  
14       procurement contract within the meaning of section  
15       6303 of title 31, United States Code.

16           “(2) COOPERATIVE AGREEMENT.—The term  
17       ‘cooperative agreement’ means a cooperative agree-  
18       ment within the meaning of section 6305 of title 31,  
19       United States Code.

20           “(3) DIRECTOR.—The term ‘Director’ means  
21       the Director of the National Science Foundation.

22           “(4) GRANT.—The term ‘grant’ means a grant  
23       awarded under a grant agreement (within the mean-  
24       ing of section 6304 of title 31, United States Code).

1           “(5) INDUSTRIAL ENTERPRISE.—The term ‘in-  
2       dustrial enterprise’ means a private, nongovern-  
3       mental enterprise that has an expertise or capability  
4       that relates to methane hydrate research and devel-  
5       opment.

6           “(6) INSTITUTION OF HIGHER EDUCATION.—  
7       The term ‘institution of higher education’ means an  
8       institution of higher education (as defined in section  
9       102 of the Higher Education Act of 1965 (20  
10      U.S.C. 1002)).

11          “(7) SECRETARY.—The term ‘Secretary’ means  
12      the Secretary of Energy, acting through the Assist-  
13      ant Secretary for Fossil Energy.

14          “(8) SECRETARY OF COMMERCE.—The term  
15      ‘Secretary of Commerce’ means the Secretary of  
16      Commerce, acting through the Administrator of the  
17      National Oceanic and Atmospheric Administration.

18          “(9) SECRETARY OF DEFENSE.—The term  
19      ‘Secretary of Defense’ means the Secretary of De-  
20      fense, acting through the Secretary of the Navy.

21          “(10) SECRETARY OF THE INTERIOR.—The  
22      term ‘Secretary of the Interior’ means the Secretary  
23      of the Interior, acting through the Director of the  
24      United States Geological Survey, the Director of the

1 Bureau of Land Management, and the Director of  
2 the Minerals Management Service.

3 **“SEC. 4. METHANE HYDRATE RESEARCH AND DEVELOP-**  
4 **MENT PROGRAM.**

5 “(a) IN GENERAL.—

6 “(1) COMMENCEMENT OF PROGRAM.—Not later  
7 than 90 days after the date of the enactment of the  
8 Methane Hydrate Research and Development Reau-  
9 thorization Act of 2005, the Secretary, in consulta-  
10 tion with the Secretary of Commerce, the Secretary  
11 of Defense, the Secretary of the Interior, and the  
12 Director, shall commence a program of methane hy-  
13 drate research and development in accordance with  
14 this section.

15 “(2) DESIGNATIONS.—The Secretary, the Sec-  
16 retary of Commerce, the Secretary of Defense, the  
17 Secretary of the Interior, and the Director shall des-  
18 ignate individuals to carry out this section.

19 “(3) COORDINATION.—The individual des-  
20 ignated by the Secretary shall coordinate all activi-  
21 ties within the Department of Energy relating to  
22 methane hydrate research and development.

23 “(4) MEETINGS.—The individuals designated  
24 under paragraph (2) shall meet not later than 180  
25 days after the date of the enactment of the Methane

1 Hydrate Research and Development Reauthorization  
2 Act of 2005 and not less frequently than every 180  
3 days thereafter to—

4 “(A) review the progress of the program  
5 under paragraph (1); and

6 “(B) coordinate interagency research and  
7 partnership efforts in carrying out the program.

8 “(b) GRANTS, CONTRACTS, COOPERATIVE AGREE-  
9 MENTS, INTERAGENCY FUNDS TRANSFER AGREEMENTS,  
10 AND FIELD WORK PROPOSALS.—

11 “(1) ASSISTANCE AND COORDINATION.—In car-  
12 rying out the program of methane hydrate research  
13 and development authorized by this section, the Sec-  
14 retary may award grants to, or enter into contracts  
15 or cooperative agreements with, institutions of high-  
16 er education and industrial enterprises to—

17 “(A) conduct basic and applied research to  
18 identify, explore, assess, and develop methane  
19 hydrate as a commercially viable source of en-  
20 ergy;

21 “(B) identify methane hydrate resources  
22 through remote sensing;

23 “(C) acquire and reprocess seismic data  
24 suitable for characterizing methane hydrate ac-  
25 cumulations;

1           “(D) assist in developing technologies re-  
 2           quired for efficient and environmentally sound  
 3           development of methane hydrate resources;

4           “(E) promote education and training in  
 5           methane hydrate resource research and re-  
 6           source development through fellowships or other  
 7           means for graduate education and training;

8           “(F) conduct basic and applied research to  
 9           assess and mitigate the environmental impact of  
 10          hydrate degassing (including both natural  
 11          degassing and degassing associated with com-  
 12          mercial development);

13          “(G) develop technologies to reduce the  
 14          risks of drilling through methane hydrates; and

15          “(H) conduct exploratory drilling, well  
 16          testing, and production testing operations on  
 17          permafrost and non-permafrost gas hydrates in  
 18          support of the activities authorized by this  
 19          paragraph, including drilling of 1 or more full-  
 20          scale production test wells.

21          “(2) COMPETITIVE PEER REVIEW.—Funds  
 22          made available under paragraph (1) shall be made  
 23          available based on a competitive process using exter-  
 24          nal scientific peer review of proposed research.

25          “(c) METHANE HYDRATES ADVISORY PANEL.—

1           “(1) IN GENERAL.—The Secretary shall estab-  
2       lish an advisory panel (including the hiring of appro-  
3       priate staff) consisting of representatives of indus-  
4       trial enterprises, institutions of higher education,  
5       oceanographic institutions, State agencies, and envi-  
6       ronmental organizations with knowledge and exper-  
7       tise in the natural gas hydrates field, to—

8           “(A) assist in developing recommendations  
9       and broad programmatic priorities for the  
10      methane hydrate research and development pro-  
11      gram carried out under subsection (a)(1);

12          “(B) provide scientific oversight for the  
13      methane hydrates program, including assessing  
14      progress toward program goals, evaluating pro-  
15      gram balance, and providing recommendations  
16      to enhance the quality of the program over  
17      time; and

18          “(C) not later than 2 years after the date  
19      of the enactment of the Methane Hydrate Re-  
20      search and Development Reauthorization Act of  
21      2005, and at such later dates as the panel con-  
22      siders advisable, submit to Congress—

23           “(i) an assessment of the methane hy-  
24      drate research program; and



1                   “(ii) an assessment of the 5-year re-  
2                   search plan of the Department of Energy.

3                   “(2) CONFLICTS OF INTEREST.—In appointing  
4                   each member of the advisory panel established under  
5                   paragraph (1), the Secretary shall ensure, to the  
6                   maximum extent practicable, that the appointment  
7                   of the member does not pose a conflict of interest  
8                   with respect to the duties of the member under this  
9                   Act.

10                  “(3) MEETINGS.—The advisory panel shall—  
11                   “(A) hold the initial meeting of the advi-  
12                   sory panel not later than 180 days after the  
13                   date of establishment of the advisory panel; and  
14                   “(B) meet biennially thereafter.

15                  “(4) COORDINATION.—The advisory panel shall  
16                   coordinate activities of the advisory panel with pro-  
17                   gram managers of the Department of Energy at ap-  
18                   propriate national laboratories

19                  “(d) CONSTRUCTION COSTS.—None of the funds  
20                   made available to carry out this section may be used for  
21                   the construction of a new building or the acquisition, ex-  
22                   pansion, remodeling, or alteration of an existing building  
23                   (including site grading and improvement and architect  
24                   fees).

1       “(e) RESPONSIBILITIES OF THE SECRETARY.—In  
2 carrying out subsection (b)(1), the Secretary shall—

3           “(1) facilitate and develop partnerships among  
4 government, industrial enterprises, and institutions  
5 of higher education to research, identify, assess, and  
6 explore methane hydrate resources;

7           “(2) undertake programs to develop basic infor-  
8 mation necessary for promoting long-term interest in  
9 methane hydrate resources as an energy source;

10          “(3) ensure that the data and information de-  
11 veloped through the program are accessible and  
12 widely disseminated as needed and appropriate;

13          “(4) promote cooperation among agencies that  
14 are developing technologies that may hold promise  
15 for methane hydrate resource development;

16          “(5) report annually to Congress on the results  
17 of actions taken to carry out this Act; and

18          “(6) ensure, to the maximum extent prac-  
19 ticable, greater participation by the Department of  
20 Energy in international cooperative efforts.

21 **“SEC. 5. NATIONAL RESEARCH COUNCIL STUDY.**

22       “(a) AGREEMENT FOR STUDY.—The Secretary shall  
23 offer to enter into an agreement with the National Re-  
24 search Council under which the National Research Council  
25 shall—

1           “(1) conduct a study of the progress made  
2           under the methane hydrate research and develop-  
3           ment program implemented under this Act; and

4           “(2) make recommendations for future methane  
5           hydrate research and development needs.

6           “(b) REPORT.—Not later than September 30, 2009,  
7           the Secretary shall submit to Congress a report containing  
8           the findings and recommendations of the National Re-  
9           search Council under this section.

10   **“SEC. 6. REPORTS AND STUDIES FOR CONGRESS.**

11           “The Secretary shall provide to the Committee on  
12           Science of the House of Representatives and the Com-  
13           mittee on Energy and Natural Resources of the Senate  
14           copies of any report or study that the Department of En-  
15           ergy prepares at the direction of any committee of Con-  
16           gress.

17   **“SEC. 7. AUTHORIZATION OF APPROPRIATIONS.**

18           “There are authorized to be appropriated to the Sec-  
19           retary to carry out this Act, to remain available until ex-  
20           pended—

21           “(1) \$15,000,000 for fiscal year 2006;

22           “(2) \$20,000,000 for fiscal year 2007;

23           “(3) \$30,000,000 for fiscal year 2008;

24           “(4) \$50,000,000 for fiscal year 2009; and

1 “(5) \$50,000,000 for fiscal year 2010.”.

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